

PTO/SB/08b (08-08)

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Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Complete if Known		
			Application Number	10/587,598-Conf. #3666	
			Filing Date	April 27, 2007	
			First Named Inventor	John E. O'Gara	
			Art Unit	1796	
			Examiner Name	Moore, Margaret G.	
Sheet	1	of	5	Attorney Docket Number	59894(49991)

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	AA*	US-3,892,678	07-01-1975	Halasz et al.	
	AB*	US-3,935,299	01-27-1976	Kiselev et al.	
	AC*	US-4,017,528-A	04-12-1977	Unger et al.	
	AD*	US-4,029,583	06-14-1977	Ho Chang et al.	
	AE*	US-4,104,363	08-01-1978	Vozka et al.	
	AF*	US-4,169,069	09-25-1979	Unger et al.	
	AG*	US-4,324,689	04-13/1982	Shah	
	AH*	US-4,327,191	04-27-1982	Dromard et al.	
	AI*	US-4,724,207-A	02-09-1988	Hou et al.	
	AJ*	US-4,775,520	10-04-1988	Unger et al.	
	AK*	US-4,889,632	12-26-1989	Svec et al.	
	AL*	US-4,911,903	03-27-1990	Unger et al.	
	AM*	US-4,923,610	05-08-1990	Svec et al.	
	AN*	US-4,952,349	08-28-1990	Svec et al.	
	AO*	US-4,983,369	01-08-1991	Barder et al.	
	AP*	US-5,068,387	11-26-1991	Kleyer et al.	
	AQ*	US-5,071,565	12-10-1991	Fritz et al.	
	AR*	US-5,108,595	04-28-1992	Kirkland et al.	
	AS*	US-5,137,627	08-11-1992	Felbush	
	AT*	US-5,154,822	10-13-1992	Simpson et al.	
	AU*	US-5,177,128	01-05-1993	Lindemann et al.	
	AV*	US-5,194,333	03-16-1993	Ohnaka et al.	
	AW*	US-5,256,386	10-26-1993	Nystrom et al.	
	AX*	US-5,271,833	12-21-1993	Funkenbusch et al.	
	AY*	US-5,298,833	03-29-1994	Hou	
	AZ*	US-5,374,755	12-20-1994	Neue et al.	
	AA1*	US-5,378,790-A	01-03-1995	Michalczyk et al.	
	AB1*	US-5,425,930	06-20-1995	Anderson	
	AC1*	US-5,453,185	09-26-1995	Frechet et al.	
	AD1*	US-5,498,678	03-12-1996	Steffier	
	AE1*	US-5,548,051	08-20-1996	Michalczyk et al.	
	AF1*	US-5,558,849	09-24-1996	Sharp	
	AG1*	US-5,565,142	10-15-1996	Deshpande et al.	
	AH1*	US-5,624,875	04-29-1997	Nakanishi et al.	
	AI1*	US-5,637,135-A	06-10-1997	Ottenstein et al.	
	AJ1*	US-5,650,474	07-22-1997	Yamaya et al.	
	AK1*	US-5,651,921	07-29-1997	Kajjou et al.	

Examiner Signature	/Robert Loewe/	Date Considered	03/15/2010
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	AL1*	US-5,667,674	09-16-1997	Hanggi et al.	
	AM1*	US-5,728,457	03-17-1998	Frechet et al.	
	AN1*	US-5,734,020	03-31-1998	Wong	
	AO1*	US-5,856,379-A	01-05-1999	Shiratsuchi et al.	
	AP1*	US-5,869,152	02-09-1999	Colon	
	AQ1*	US-5,965,202-A	10-12-1999	Taylor-Smith et al.	
	AR1*	US-5,976,479	11-02-1999	Alcaraz et al.	
	AS1*	US-6,017,632	01-25-2000	Pinnavaia et al.	
	AT1*	US-6,022,902	02-08-2000	Koontz	
	AU1*	US-6,027,643	02-22-2000	Small et al.	
	AV1*	US-6,090,477	07-18-2000	Burchell et al.	
	AW1*	US-6,136,187	10-24-2000	Zare et al.	
	AX1*	US-6,183,867	02-06-2001	Barthel et al.	
	AY1*	US-6,207,098	03-27-2001	Nakanishi et al.	
	AZ1*	US-6,210,570	04-03-2001	Holloway	
	AA2*	US-6,227,304	05-08-2001	Schlegel	
	AB2*	US-6,238,565-B1	05-29-2001	Hatch	
	AC2*	US-6,248,686	06-19-2001	Inagaki et al.	
	AD2*	US-6,271,292	08-07-2001	Mager et al.	
	AE2*	US-6,277,304	08-21-2001	Wei et al.	
	AF2*	US-6,281,257	08-28-2001	Ma et al.	
	AG2*	US-6,288,198	09-11-2001	Mechtel et al.	
	AH2*	US-6,313,219	11-06-2001	Taylor-Smith	
	AI2*	US-6,380,266	04-30-2002	Katz et al.	
	AJ2*	US-6,395,341	05-28-2002	Arakawa et al.	
	AK2*	US-6,465,387	10-15-2002	Pinnavaia et al.	
	AL2*	US-6,476,098	11-05-2002	Arakawa et al.	
	AM2*	US-6,686,035	02-03-2004	Jiang et al.	
	AN2*	US-7,175,913	02-13-2007	O'Gara	
	AO2*	US-7,223,473	05-29-2007	Jiang et al.	
	AP2*	US-7,250,214	07-31-2007	Walter et al.	
	AQ2*	US-20010033931	10-25-2001	Jiang et al.	
	AR2*	US-20030150811	08-14-2003	Walter et al.	
	AS2*	US-20040191516	09-30-2004	Jiang et al.	
	AT2*	US-20050230298	09-20-2005	Jiang et al.	
	AU2*	US-20070135304	06-14-2007	Walter et al.	
	AV2*	US-20080053894	03-06-2008	O'Gara	
	AW2*	US-20070243383	10-18-2007	Jiang et al.	

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		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY			
	BA	EP-0852334	07-08-1998	Bio Rad Laboratories		
	BB	EP-1163050	12-19-2001	Waters Investments Ltd		
	BC	JP-2893104	05-1999			
	BD	JP-7247180	09-26-1995	Soga Naohiro et al.		
	BE	WO-98/058253	12-23-1998	Merck Patent GMBH		
	BF	WO-99/037705	07-29-1999	The Regents of the University of California		
	BG	WO-00/45951	08-10-2000	Waters Investments Ltd et al.		
	BH	WO-01/18790	03-2001	Sundqvist et al.		
	BI	WO-03/14450	02-20-2003	Waters Investments Ltd et al.		
	BJ	WO-03/22392	03-20-2003	Waters Investments Ltd et al.		
	BK	WO-04/41398	05-21-2004	Waters Investments Ltd et al.		
	BL	WO-2005/079427	09-01-2005	Waters Investments Ltd et al.		

NON PATENT LITERATURE DOCUMENTS					
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	CA	ASIAIE et al. "Sintered Octadecylsilica as Monolithic Column Packing in Capillary Electrochromatography and Micro High-Performance Liquid Chromatography", J. Chromatogr. A, 806: 251-263 (1998).			
	CB	BEREZNITSKI, et al. "Characterization of silica-based octyl phases of different bonding density part II. Studies of surface properties and chromatographic selectivity," 1998. J. Chromatogr. A 828:59-73.			
	CC	BOURY et al. "Generation of porosity in a hybrid organic-inorganic xerogel by chemical treatment," 1999. New J. Chem. 23: 531-538			
	CD	BOURY et al., "Hybrid organic-inorganic xerogel access to meso- and microporous silica by thermal and chemical treatment," 1999. Chem. Mater. 11:281-291			
	CE	COLLIOUD, et al. "Oriented and covalent immobilization of target molecules to solid supports: synthesis and application of a light-activatable and thiol-reactive cross-linking reagent," 1993. Bioconjugate 4:528-536.			
	CF	CZAJKOWSKA et al., "Adsorption, thermogravimetric, and chromatographic studies of bare silicas and silica-based octyl bonded phases," 1998. J. Liq. Chromatogr. Relat. Technol. 21:1957-1977			
	CG	CHUJO et al., "New Preparative Methods for Organic-Inorganic Polymer Hybrids", Polymeric Materials: Science & Engineering 2001, 84, 783			

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	CH	CHUJO et al., "New Preparative Methods for Organic-Inorganic Polymer Hybrids", Mrs Bulletin/May 2001; 389-392	
	CI	DULAY et al., "Preparation and Characterization of Monolithic Porous Capillary Columns Loaded with Chromatographic Particles", Anal. Chem., 70(23): 5103-5107 (1998).	
	CJ	FENG et al., "Synthesis of Polymer-Modified Mesoporous Materials Via the Nonsurfactant-Templated Sol-Gel Process", Polymer Preprints 2000, 41(1), 515-516	
	CK	FENG et al., "Synthesis of Polystyrene-silica hybrid mesoporous materials via the nonsurfactant-templated Sol-Gel Process", J. Mater. Chem., 2000, 10, 2490-2494	
	CL	GOLDSTEIN, et al., "Microwave Sintering of Amorphous Silica Powders", J. of Mat. Sci. Letters, 16: 310-312 (1997).	
	CM	GRUN et al., Microporous and Mesoporous Materials 1999, 27, pp. 207	
	CN	HILEMAN et al., Anal. Chem. 1973, 45, pp. 1126	
	CO	HANSON, M. J. Chromatography A, 1993, 656, pp. 369. cited by other.	
	CP	INAGAKI, et al. J. Am. Chem. Soc. 1999, 121, 9611.	
	CQ	JONES et al., "The oxidation of the carbon-silicon bond," 1996. Tetrahedron, 52(22):7599-7662	
	CR	MASKOS et al., "Oligonucleotide hybridizations on glass supports: a novel linker for oligonucleotide synthesis and hybridization properties of oligonucleotides synthesised in situ," 1992. Nucleic Acids Research 20(7):1679-1684	
	CS	MACBEATH et al., "Printing proteins as microarrays for high-throughput function determination," 2000. Science 289:1760-1763	
	CT	NAWROCKI et al., "Influence of silica surface chemistry and structure on the properties, structure and coverage of alkyl-bonded phases for high-performance liquid chromatography," 1988. J. of Chromatography 449(1):1-24	
	CU	NAWROCKI, "Silica surface controversies, strong adsorption sites, their blockage and removal. Part 1," 1991. Chromatographia 31(3-4):177-192	
	CV	NEUE et al., "Use of high-performance LC packings from pH 1 to pH 12," 1999 American Laboratory, p. 36-39	
	CW	O'GARA et al., "Simple preparation of C8 HPLC stationary phase with an internal polar functional group," 1995 Analytical Chemistry 67:3809-13	
	CX	O'GARA et al., "Dependence of cyano bonded phase hydrolytic stability on ligand structure and solution pH," 2000 J. Chromatogr. A 893:245-251	
	CY	PETRO et al., Chromatographia, 1993, 9/10, pp. 549	
	CZ	PERRY, R.J., Chemtech, 1999, pp. 39	

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	CA1	REYNOLDS et al., "Submicron sized organo-silica spheres for capillary electrochromatography," 2000 J. Liq. Chrom & Rel. Technol., 23(1):161-173		
	CB1	Silsesquixanes - An Introduction to Hybrid Inorganic - Organic Composites - Data by Sigma Aldrich. Retrieved 12/4/2006 from http://www.azom.com/details.asp?ArticleID=2934		
	CC1	TAMAKI et al., "Synthesis of polystyrene/silica gel polymer hybrids by in-situ polymerization method", Polymer Bulletin 39, 303-310		
	CD1	TAMAO, K. "Oxidative cleavage of the silicon-carbon bond: Development, mechanism, scope, and limitations," 1996 Advances in Silicon Chemistry, 3:1-62.		
	CE1	TAMAO et al., "Oxidative cleavage of silicon-carbon bonds in organosilicon fluorides to alcohols," 1982 Tetrahedron 39(6):983-990		
	CF1	TAMAO et al., "Hydrogen peroxide oxidation of the silicon-carbon bond in organoalkoxysilanes," 1983 Organometallics 2: 1694-1696		
	CG1	TANG et al., "Monolithic Columns Containing Sol-Gel Bonded Octadecylsilica for Capillary Electrochromatography", J. Chromatogr. A, 837: 35-50 (1999).		
	CH1	TANG et al., "Continuous-Bed Columns Containing Sol-Gel Bonded Octadecylsilica for Capillary Liquid Chromatography", J. Microcolumn Separations, 12: 6-12 (2000).		
	CI1	UENO et al., "Compaction and Sintering Behavior of Silica Particles Surface-Modified by Al Chelate Compounds", Journal of the Ceramic Society of Japan, 109(3): 210-216 (2001).		
	CJ1	UNGER et al., "Recent developments in the evaluation of chemically bonded silica packings for liquid chromatography," J. Chromatogr. 1976, 125(1): 115-127		
	CK1	WEI et al., "Synthesis and Biotechnological Application of Vinyl Polyme-Inorganic Hybrid...", Chinese Journal of Polymer Science, Vol. 18, No. 1, (2000), 1-7		
	CL1	WEI et al., "Polymethacrylate-silica Hybrid nanoporous materials...", Adv. Mater. 2000, 12, No. 19, October 2, 1448-1450		
	CM1	XIN, et al., "Design and Evaluation of a New Capillary Electrochromatography System", Electrophoresis, 20: 67-73 (1999).		
	CN1	YANG et al., "Oxidative cleavage of carbon-silicon bond as a new method to characterize bonded stationary phases on silica gel," 1998 Anal. Chem. 70:2827-2830		

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